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☐	L3	((increas$4 or rais$4 or higher) near2 (speed or frequency) near2 (beyond or past) near2 (maximum or threshold or allowable))	88
☐	L2	((increas$4 or rais$4 or higher) near3 (speed or frequency) near3 (beyond or past) near3 (maximum or threshold or allowable))	122
☐	L1	((increas$4 or rais$4 or higher) near5 (speed or frequency) near5 (beyond or past) near5 (maximum or threshold or allowable))	228

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L21: Entry 1 of 5 File: USPT May 8, 2001

DOCUMENT-IDENTIFIER: US 6230279 B1
TITLE: System and method for dynamically controlling processing speed of a computer in response to user commands

Detailed Description Text (43):
FIGS. 13 and 14 show modifications of the GUI environments in FIGS. 11 and 12, respectively. In these modifications, in response to an accelerator manipulation by the user, an increase in CPU speed beyond the upper speed limit is temporarily allowed. In this case, the CPU speed is temporarily increased beyond the upper speed limit, but the CPU speed is forcibly decreased by, e.g., two steps afterward.

Current US Cross Reference Classification (1):
713/322

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L5: Entry 13 of 31 File: USPT Jul 18, 2000

DOCUMENT-IDENTIFIER: US 6091255 A
TITLE: System and method for tasking processing modules based upon temperature

Detailed Description Text (17):
In one embodiment, the on-chip thermometers 200 are each comprised of one or more circuits which operate at a given speed. The speed of at least one of the circuits in each thermometer changes as the circuits are exposed to changes in local temperature. In one embodiment, shown in FIG. 3A, each of the on-chip thermometers includes a clock 210 coupled to a temperature responsive circuit 220, and a counter 230. The temperature responsive circuit 220 is also coupled to the counter 230. The counter 230 is optionally coupled to one or more registers 240. The temperature responsive circuit 220 is preferably a ring oscillator, but it is contemplated that other circuits may be used, as shown in FIG. 3B. Desirable properties of the temperature responsive circuit 220 may include an operating speed that is substantially constant over an operating temperature range, with the operating speed slowing as the local temperature increases beyond the threshold, or upper limit, of the operating temperature range. Besides temperature responsive circuits 220 as disclosed, any temperature sensing device may also be used, as noted above.

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L3: Entry 2 of 88 File: USPT Apr 6, 2004

DOCUMENT-IDENTIFIER: US 6718439 B1
TITLE: Cache memory and method of operation

Brief Summary Text (4):
It is essential that a microprocessor executes instructions in the minimum amount of time. Many technologies--quite often relying on radically different approaches--have been developed to increase microprocessor speeds. One approach is to increase the speed of the clock that drives the processor. As the clock rate increases, however, the power consumption and temperature of the processor also increase. Also, processor clock speeds may not increase beyond a threshold physical speed. As a result, there is a practical maximum to the clock speed of conventional processors.

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L3: Entry 11 of 88 File: USPT Oct 9, 2001

DOCUMENT-IDENTIFIER: US 6301647 B1
TITLE: Real mode translation look-aside buffer and method of operation

Brief Summary Text (4):
The ever-growing requirement for high performance computers demands that state-of-the-art microprocessors execute instructions in the minimum amount of time. Over the years, efforts to increase microprocessor speeds have followed different approaches. One approach is to increase the speed of the clock that drives the processor. As the clock rate increases, however, the processor's power consumption and temperature also increase. Increased power consumption increases electrical costs and depletes batteries in portable computers more rapidly, while high circuit temperatures may damage the processor. Furthermore, processor clock speed may not increase beyond a threshold physical speed at which signals may traverse the processor. Simply stated, there is a practical maximum to the clock speed that is acceptable to conventional processors.

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L3: Entry 58 of 88 File: USPT Feb 13, 1979

DOCUMENT-IDENTIFIER: US 4138847 A
TITLE: Heat recuperative engine

Detailed Description Text (54):
Recuperator efficiency rises as the difference in temperature of the working medium on opposite sides of intermediate wall 93 is reduced. This can be done by making the cavity wall thickness separating the engine working medium from the heat pipe medium as thin as practical within the limitations of the strength of the materials of which the embodiment is constructed. Cavity walls and heat pipe walls in the recuperator preferably have excellent conductivity. Recuperator efficiency rises as the arc length of the recuperator sections is increased, since this increases the recuperator heat-exchange area and reduces the required rate of heat transmission per unit area. It is also beneficial to recuperator efficiency if surface-volume ratio in the recuperator is large. Heat pipes used in the recuperator should have a total transmission capacity at the designed operating temperatures at least equal to the required heat flux across the cavity walls at the designed output rating. No recuperator can be 100% efficient and efficiency will fall as engine speed and output are increased beyond the maximum efficiency. Since the recuperator will not ordinarily raise the temperature of the compressed working medium leaving recuperator section 142 to be quite equal to the temperature of the expanded working medium entering recuperator section 124 a constant-volume reheat section 144 downstream of non-exchange area 143 is provided with heat pipes 120 to add external source heat from heater 121 to the working medium before expansion in first stage expansion section 145. Heat pipes can ordinarily attain higher heat transport capacities if their condensing sections are oriented vertically above their evaporating sections and it is therefore preferable in prime mover embodiments to have the recuperator heat pipes vertically oriented (i.e., shafts 97 and 104 are vertically mounted) and to have cavity 94, which contains the condensing ends of heat pipes 125, vertically above cavity 91.

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L3: Entry 61 of 88 File: USPT Aug 10, 1976

DOCUMENT-IDENTIFIER: US 3974429 A
TITLE: Propulsion control system for electrically powered vehicles

Detailed Description Text (36):
The second diminish function may be termed "engine over speed". Under some conditions of dynamic braking, for example, when braking on a long hill, sufficient horsepower may be delivered to the internal combustion engine 25 from the direct current generator (acting as a motor) to tend to increase the engine speed beyond a desirable maximum. A signal proportional to engine over speed is supplied from component circuit X to terminal 9. A resulting current is conducted through Diode D4 and resistor R4 to the base of Q2 causing a decrease of motor field excitation so that less horsepower will be supplied from the wheel motors (now acting as generators) to the direct current generator (then acting as a motor) to reduce engine speed.

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L3: Entry 64 of 88 File: USPT Mar 2, 1976

DOCUMENT-IDENTIFIER: US 3941225 A
TITLE: Speed limiting accessory drive system and apparatus therefor

Brief Summary Text (7):
The present invention has as one of its more important objects, the provision of a speed-limiting accessory drive system in which the accessory speed is increased by a high drive ratio at lower engine speeds and then limited at a maximum control speed regardless of increased engine speeds beyond that control speed.

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L5: Entry 1 of 31 File: USPT Apr 13, 2004

DOCUMENT-IDENTIFIER: US 6721772 B1
TITLE: Rounding denormalized numbers in a pipelined floating point unit without pipeline stalls

Brief Summary Text (5):
Over the years, the quest for ever-increasing processing speeds has followed different directions. One approach to improve computer performance is to increase the rate of the clock that drives the processor. As the clock rate increases, however, the processor's power consumption and temperature also increase. Increased power consumption is expensive and high circuit temperatures may damage the processor. Further, the processor clock rate may not increase beyond a threshold physical speed at which signals may traverse the processor. Simply stated, there is a practical maximum to the clock rate that is acceptable to conventional processors.

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L21: Entry 3 of 5 File: USPT Aug 17, 1999

DOCUMENT-IDENTIFIER: US 5940786 A
TITLE: Temperature regulated clock rate for microprocessors

Brief Summary Text (19):
The advantages accruing to the present invention are numerous. For example, the present invention allows specification of a microprocessor having a lower rated temperature range in applications where excessive temperatures may be experienced only infrequently. The present invention also provides a built-in protection from failure due to operation at excessively high temperatures: The present invention also allows a temporary increase in microprocessor speed during sections of program code requiring extensive calculations to prevent loop overrun faults which may trigger a watchdog timer reset.

Detailed Description Text (13):
Increased frequency operation of the microprocessor may also be used temporarily provided the temperature of the microprocessor is below a predetermined critical temperature. For example, a temporary increase in microprocessor clock speed may be used for sections of program code which require complex calculations or operations to avoid a loop overrun and associated watchdog timer reset. Clock speed is then returned to 100% of rated speed after the code section (procedure or routine) is completed.

Current US Cross Reference Classification (3):
713/322

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L16: Entry 1 of 11 File: USPT Mar 18, 2003

DOCUMENT-IDENTIFIER: US 6533731 B2
TITLE: Method and apparatus for measuring heat flow

Brief Summary Text (5):
The determination of caloric expenditure is an important component of any weight control or fitness program. The number of calories burned is generally estimated through the use of tabulated values for a given activity or by the use of workload measurements on exercise equipment such as treadmills or bikes. Neither, however, is particularly reliable. The tables are generally only average rates for a 70 kg individual performing each activity in some arbitrary, average manner. Certainly not very reflective of any given individual's caloric expenditures, the tables may vary as much as 50% from actual caloric expenditures. Exercise equipment having calorie calculators makes similar errors, and such equipment fails to provide any indication of total caloric expenditure for the day.

Brief Summary Text (10):
Traditional heat flow sensors are generally based on the measurement of the temperature differential that occurs across a material due to the thermal resistance of that material. In order for the sensor to accurately measure the heat flow, it must not add a significant insulating layer and it must lose heat from its surface in the same manner as the surface on which it is placed. Certain available heat flow sensors perform well on inanimate objects such as walls, doors, boilers, and pipes, where convective, radiant, and conductive heat loss mechanisms predominate. Such heat flow sensors are, however, inadequate for measuring heat loss from the human body, where evaporative heat loss may be significant.

Detailed Description Text (12):
In order to prevent artificial heat retention in the tissue surrounding the heat flow sensor 8, the method of fastening the apparatus to the user should not inhibit heat flow. If the method of fastening the apparatus to the user traps heat against the skin surface, i.e. it insulates, there is a danger that the artificially increased skin temperature will cause a measurement error by the heat flow sensor. Preferably, therefore, the straps used for mounting heat flow sensor 8 use an open weave material, preferably having openings of 1/8-1/4 inch and over 95% open area, to fasten the device to the user; however, other materials may also be used.

Detailed Description Text (29):
The novel sensors 500 and 600 of respective FIGS. 5 and 6 operate on the basis of electroendosmosis in which an electrical bias is used to assist in the migration of perspiration to appropriate points on a sensor. An alternative approach, however, recognized by the present inventors to allow perspiration to more easily migrate onto an active area of a sensor is to reduce at least one dimension of the sensor, to thereby decrease the distance the perspiration has to migrate. In that context, the sensor element 10 can take the form of a thermocouple utilized to measure heat loss across an interlayer. A structure of a background thermocouple sensor is shown in FIG. 7. As shown in FIG. 7, a background thermocouple sensor 700 includes an interlayer 710 across which a difference in temperature is measured. That is, the thermocouple sensor 700 has a structure to measure a temperature difference between a bottom of the interlayer 710 and a top of the interlayer 710. The thermocouple sensor 700 of FIG. 7 achieves that operation by forming plural thermocouples 715 at